TAGSYS RFID™
e-connecting goods

SRU-400

User's Guide

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www.tagsysrfid.com

Publishing Information

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Read This First

Welcome to the TAGSYS RFID System. This User's Guide is designed to help you get up and running quickly using this high-quality Radio Frequency Identification (RFID) system. It describes all you need to know about how to install and use the TAGSYS system and its associated applications.

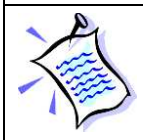
It provides a step-by-step guide for the following procedures:

- Installation of the SRU-400
- Configuring the product for use within your application

This guide is designed for all CIT (Certified Integrators by TAGSYS) and for TAGSYS Expert Network customers implementing a low-cost and high-performance RFID solution.

This document does not assume any previous knowledge of Radio Frequency Identification (RFID) technology.

Conventions

Symbol	Meaning
	CAUTION: A note that advises users that a specific action could result in the loss of data or damage the hardware. **WARNING**: A note that advises users that a specific action may result in physical harm.
	A note that provides additional information that helps the user perform a task or obtain the best performance from the product.

If you need assistance

Please contact your nearest TAGSYS sales representative or the TAGSYS welcome desk at:

Telephone: +33 (0) 4 42 18 89 00
Fax: +33 (0) 4 42 18 89 01
E-Mail: info@tagsysrfid.com
Website: http://www.tagsysrfid.com

Contact for Comments

We welcome your feedback to help us provide high quality documentation.

For technical comments, please contact our welcome desk:

Telephone: +33 (0) 4 42 18 89 00
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Please remember to quote the Document Reference Doc 12384A5, your job title and your company.

Quality Issues

TAGSYS implements stringent quality controls at all stages of its manufacturing process. However, should you find a defect with this product, please notify your TAGSYS Quality Service representative using the dedicated Product Return Form.

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1 For Your Safety

1.1 General Use

The SRU-400 is designed to be rugged and reliable and to provide years of trouble-free service. Please observe the following general tips:

- Take care not to scratch the device. Keep the device clean. When working with the device, use only TAGSYS-approved accessories.
- This device is not waterproof and should not be exposed to rain or moisture. Under extreme conditions, water may enter the circuitry. In general, treat the device as you would a pocket calculator or other small electronic instrument.
- Take care not to drop the device or subject it to any strong impact.
- Protect the device from extreme temperatures. For example, do not leave the device on the dashboard of a car or truck on a hot day or on a day when temperatures are below freezing, and keep it away from heaters and other heat sources.
- Do not store or use the device in any location that is extremely dusty, damp, or wet.
- Use a soft, damp cloth to clean the device. If the surface of the device becomes soiled, clean it with a soft cloth moistened with a diluted window-cleaning solution. Beware not to remove the delineated area and the TAGSYS logo.

1.2 Care and Maintenance

This device is a product of superior design and should be handled with care. The suggestions below will further increase the lifetime of this device.

- Keep the device and all parts and accessories out of the reach of small children.
- Keep the device dry. Precipitation, humidity and liquids contain minerals that will corrode electronic circuits.
- Do not use or store the device in dusty, dirty areas. Its moving parts can be damaged.
- Do not store in hot areas. High temperatures can shorten the life of electronic devices, damage batteries and warp or melt certain plastics.
- Do not store in cold areas. When the device warms up (to its normal temperature), moisture can form inside the device, which may damage electronic circuit boards.
- Do not attempt to open the device. Non-professional handling of the device may damage it.
- Handle the device with care. Shocks may break internal circuit boards.
- Do not clean the device with harsh chemicals, cleaning solvents or strong detergents. Gently wipe the device with a soft cloth slightly dampened in a mild soap-and-water solution. Beware not to remove the delineated area and the TAGSYS logo.
- Do not paint the device. Paint may clog the device’s moving parts and prevent proper operation.

1.3 Important Safety Information

1.3.1 Operating Environment

Follow all special regulations that are applicable in any area and always switch off the device whenever its use is prohibited, or when it may cause interference or danger.

When connecting the device or any accessory to another device, read its user's guide for detailed safety instructions. Do not connect incompatible products.

As with all RF equipment, users are advised that the equipment should only be used in its normal operating position.

2 Certification

2.1 Occupational Health

The SRU-400 has been designed and tested to be in conformity with the European Standard EN 50364 “Limitation of human exposure to electromagnetic fields from devices used in Electronic Article Surveillance (EAS), Radio Frequency Identification (RFID) and similar applications” in conjunction with the European Standard EN 50357 describing how to evaluate the exposure level.

2.2 Regulatory notices

An RFID system typically composed of an RF emission device connected to an antenna is subject to national regulations that may differ by country.

2.2.1 In Europe (CE and RTTE directives)

The SRU-400-EU complies with the European EMC directive. (CE Declaration of Conformity granted).

The SRU-400-EU complies with the requirements of the Telecommunication Terminal Equipment Act (FTEG) and the RTTE Directive 1995/5/CE.

The SRU-400-EU has been designed and tested to be in conformity with EN 302 208-2 v1.2.1, EN 301 489-3 v1.4.1, EN 60950-1, EN 50357 and EN50364 specifications.

It is the responsibility of the Buyer to use the SRU-400-EU as described in this User’s Guide or TAGSYS Documentation.

Any modification of the SRU-400-EU is prohibited without the written consent of TAGSYS. Unauthorized modification may void the conformity of the equipment to CE and RTTE Directives and will void the TAGSYS warranty.

If the SRU-400-EU is further integrated in a different product, it is the responsibility of the manufacturer of this complementary product to obtain the required approvals for this product.

2.2.2 In USA (FCC directive)

SRU-400-US

WARNING TO USERS IN THE UNITED STATES

FEDERAL COMMUNCIATIONS COMMISSION (FCC) RADIO

INTERFERENCE STATEMENT 47 CFR Section 15.105(b)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different to that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NO UNAUTHORIZED MODIFICATIONS

47 CFR Section 15.21

CAUTION: This equipment may not be modified, altered, or changed in any way without signed written permission from TAGSYS SA. Unauthorized modification may void the equipment authorization from the FCC and will void the TAGSYS warranty.

USA REPRESENTATIVE

Douglas Karp – Tagsys USA - 1006 W. 9th Avenue, Suite 30, King of Prussia, PA 19406

Operation is subject to the following two conditions: (1) The system devices may not cause harmful interference, and (2) The system devices must accept any interference received, including interference that may cause undesired operation.

2.3 RoHS and WEEE directives

2.3.1 RoHS (Restriction of the uses of certain Hazardous Substances)

TAGSYS certifies that this product is compliant with the European Directive 2002/95/EC for the restriction in Electric and Electronic Equipments (RoHS) of the use of the following hazardous substances:

- Lead
- Mercury

- Cadmium
- Hexavalent Chromium
- Polybrominated biphenyl flame retardants
- Polybrominated diphenyl ether flame retardants

This declaration is based on information provided by our suppliers and subcontractors.

2.3.2 WEEE (Waste Electrical and Electronic Equipment)

This product bears the selective sorting symbol for waste electrical and electronic equipment (WEEE).
This means that this product must be handled pursuant to European Directive 2002/96/EC in order to be recycled or dismantled to minimize its impact on the environment.
For further information, please contact your local or regional authorities.

3 Overview

This SRU-400 is composed of a reader and a UHF antenna providing a large area of detection in a low profile package that can be mounted either on top or below a desk or table.

The SRU-400 is provided with rubber base pads for installation in a standard desktop configuration.

The SRU-400 can also be used for any application requiring a desktop station.

The antenna has been factory calibrated and designed to offer optimal performance when the antenna is installed on top or below the surface of the desk or table.

Optimal performance is achieved when the tags to be read are placed parallel to the antenna surface and centered within delineated area.

Figure 1: SRU-400

3.1 Delivery Kit

The items listed in Table 1 are included in the delivery kit.

Table 1: Contents of the Delivery Kit

Quantity	Description
1	SRU-400
1	+12V DC power supply pack
1	Standard USB communication cable, 1.5m long, A/B type
1	Welcome Letter

Quantity	Description
1	CD-ROM including: ▪ a SRU-400 User's Guide ▪ Native Dlls with Programming Guide and C++ client application ▪ Visual Basic 6.0 suite (VB 6.0 Client Application, VB 6.0 Developers Guide, VB 6.0 Wrapper) ▪ USB drivers for Windows® 2000, 2003, XP, Vista and Seven operating system running either in 32-bit or 64-bit mode ▪ Demo software for Windows 200x, XP, Vista and Seven operating system running either in 32-bit or 64-bit mode

4 Installation

Don't skip Software Chapter and particularly the SRU-400 Initialization sequence to comply with RF regulations requirements and get optimal performances of the SRU-400.

4.1 Standard Installation

The recommended installation for the SRU-400 is the desktop configuration. Its thin shape is ergonomically designed for discreet use at the circulation desk.

4.2 Installing USB Drivers

At first connection to the PC USB port, Windows® will detect the SRU-400 reader and will ask you for drivers installation. USB drivers are located into the USB Drivers folder on the product CD-Rom.

Two drivers will be installed:

- The USB device driver.
- The virtual COM port (VCP) driver. The VCP driver emulates a standard PC COM port.

After installation of the drivers, power up and connect your SRU-400 to a spare USB port on your PC. This will launch the Windows Found New hardware Wizard

- Select "No, not this time" and click next to proceed with the installation
- Select "Install from a list or specific location (Advanced)" and then click "Next"
- Select "Search for the best driver in these locations" and click the Browse button to select the USB Drivers folder on the Product CR-Rom. Then click "Next" to proceed.
- Windows should then display a message indicating that the installation was successful. Click Finish to complete the installation

Repeat the procedure above when Windows® asks for drivers again (virtual com port).

To confirm that the installation has completed successfully, open the Device Manager and select "View > Devices by type". The TAGSYS SRU-400 appears as an additional COM port.

Drivers for Windows 98 are not provided. They are available upon request (please contact TAGSYS).

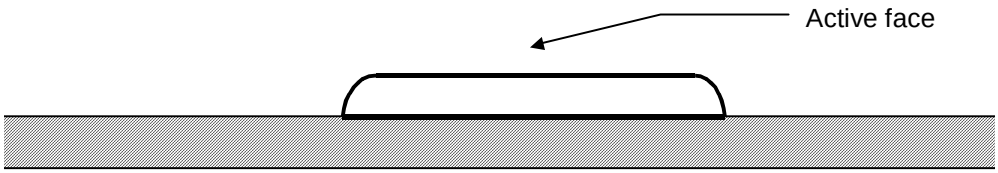
4.3 Desktop Configuration

The SRU-400 is designed for indoor use, and to especially operate:

- On wooden, synthetic or metallic desks (or those including metallic parts)
- Place the SRU-400 on the desk and connect the supplied power pack and the USB communication cable.

Other UHF equipments in proximity should not be active while the SRU-400 operates otherwise generated interferences will impact SRU-400 performances.

Figure 2: Standard Desktop Installation

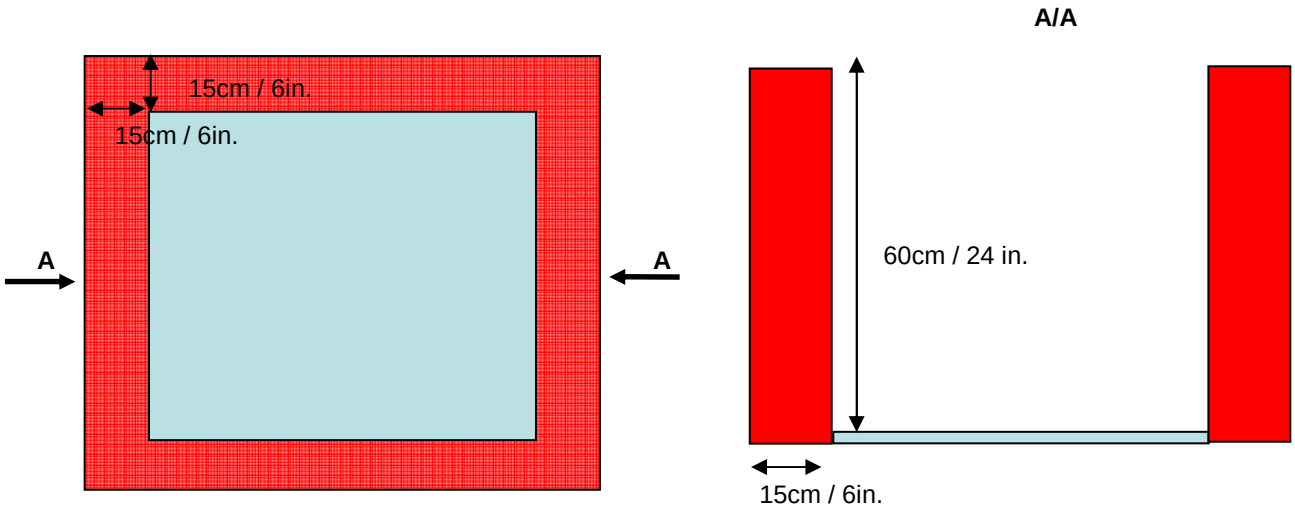


4.4 Active Area in Desktop Configuration

The unique design of the SRU-400 restricts the active area of the magnetic field radiated by the antenna to the area immediately above the cover.

TAGSYS recommends a perimeter (in red) around the SRU-400 be free of tags to prevent unwanted tags readings as shown in **Figure 3**

Figure 3: Perimeter around the SRU-400 that must be free of tags

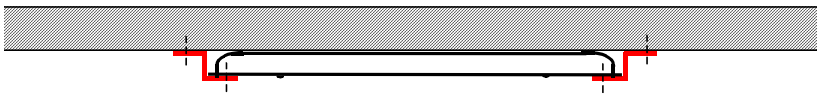


The SRU-400 may be mounted underneath a counter if required.

Metallic or conductive parts must not be present in front of the active face of the SRU-400, wood is recommended.

For best performance, always request an installation compliance agreement from TAGSYS Custom Services regarding your specific installation.

Figure 4: SRU-400 mounted underneath



This configuration may reduce reading performance (distance). For optimum performance, the antenna must placed above the desk and not underneath

5 Operation

The SRU-400 has been designed to carry on multiple items check in/out operations. According to tags types used, performances are shown below with their best practices.

- Each item must be properly tagged and initialized.
- When stacked, items must be placed in the middle of the antenna the attached tags within the delineated area.
- Maximum 10 items fitted with an Alien Squiggle Gen 2 tag. Height of the stack less than 20cm (7.9 in), minimum distance between tags greater than 10 mm (0.4 in)
- Tags lay flat over the surface of the SRU-400.

5.1 Reader Settings

We ensure performances described below we recommended you to set the SRU-400 as followed:

- Power: 21dBm
- Antenna: Tx1 and Rx1
- Baud rate: 115200

Setting antenna incorrectly may permanently damage the SRU-400

21dBm is the SRU-400 optimal power to ensure the performances described below

5.2 Single Item Configuration

- Single reading distance = 50cm (19.7 in) min.
- Electromagnetic field leakage outside the SRU-400 = 0 to 15cm (6 in) (depending on the position and orientation of the tag around the SRU-400)

Performances are given in standard configuration for a single tag operation in flat position and measured in the center of the antenna, (Tag attached to items).

5.3 Multiple Items Configuration

- Reading active area = 18x18cm (7x7 in) centered.
- Stack reading = 10 items, maximum height 20cm (7.9 in)

- Electromagnetic field leakage outside the SRU-400 = 0 to 15cm (6 in) (depending on the position and orientation of the tag around the SRU-400)
- Minimum space between 2 tags must be superior to 1cm (0.4 in)
- Performances are obtained through repetitive operations and performed with items only following best practices recommendations.
- Performances may vary according to operating considerations.

Labels coupling effects may arise in this configuration and some labels couldn't be properly detected or programmed. If this happens, we recommend you to slightly mis-aligned items or to spread them over the station.

5.4 Distance between SRU-400s

In order to prevent interferences between SRU-400s in close proximity we recommend distancing them of at least 2m.

6 Demo Software

The SRU-400 can be tested using “Tagsys UHF Explorer Software”. This utility can be used to configure the SRU-400 and perform reading operations. This section describes how to start with “Tagsys UHF Explorer Software”.

6.1 Installing the application

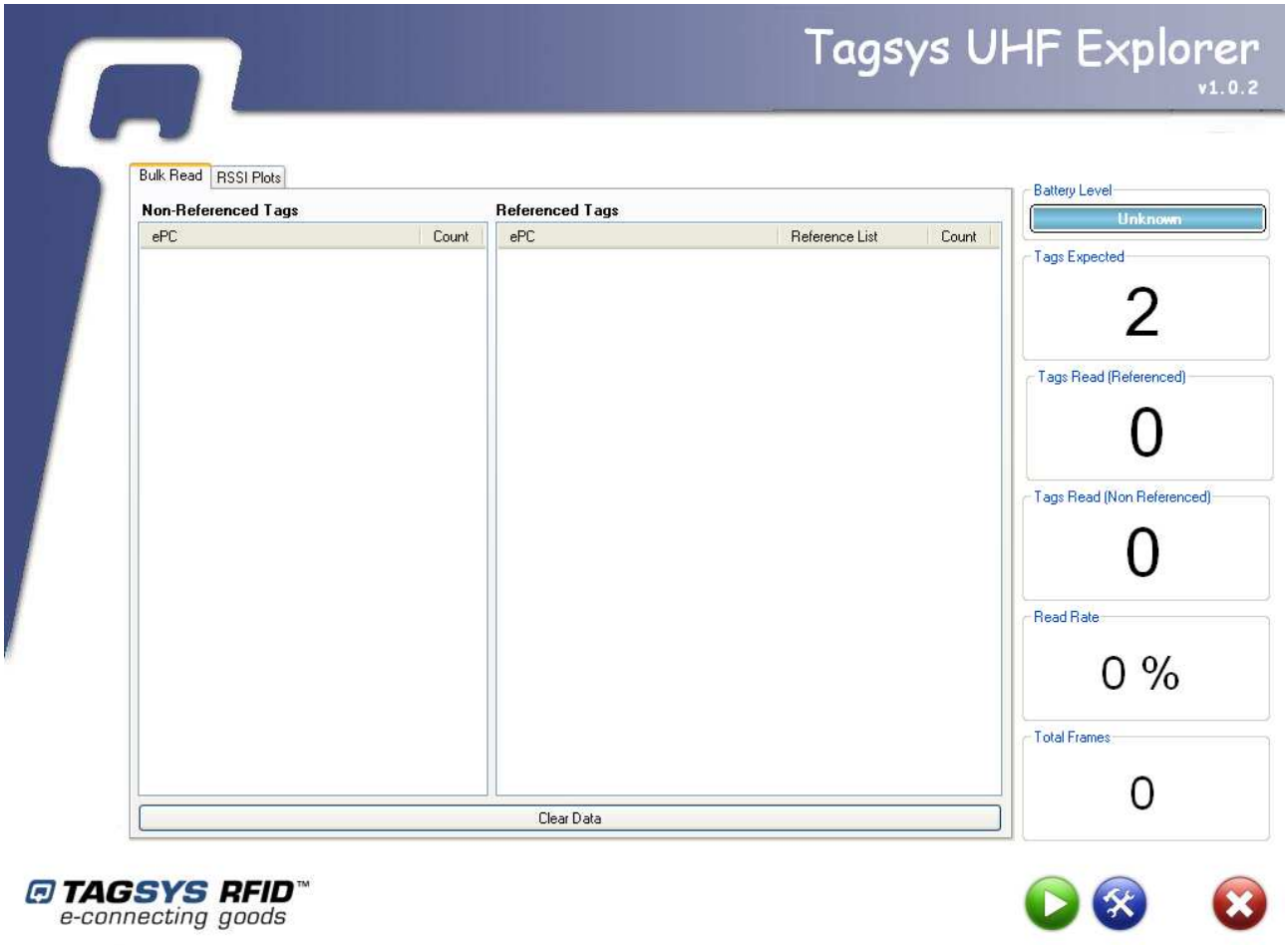
To install "Tagsys UHF Explorer", insert the product CD-ROM into the disk drive on your PC and run the setup *"Tagsys UHF Explorer vx-y-z Installer.msi"* from “\Demo Software” directory and follow the different installer steps.

A shortcut will be created on your desktop and a program group will be created in the start menu.

6.2 Running the application

Before running “Tagsys UHF Explorer”, be sure that the SRU-400 is powered up and connected to the USB Com Port of the PC.

Run “Tagsys UHF Explorer”. The following window appears:

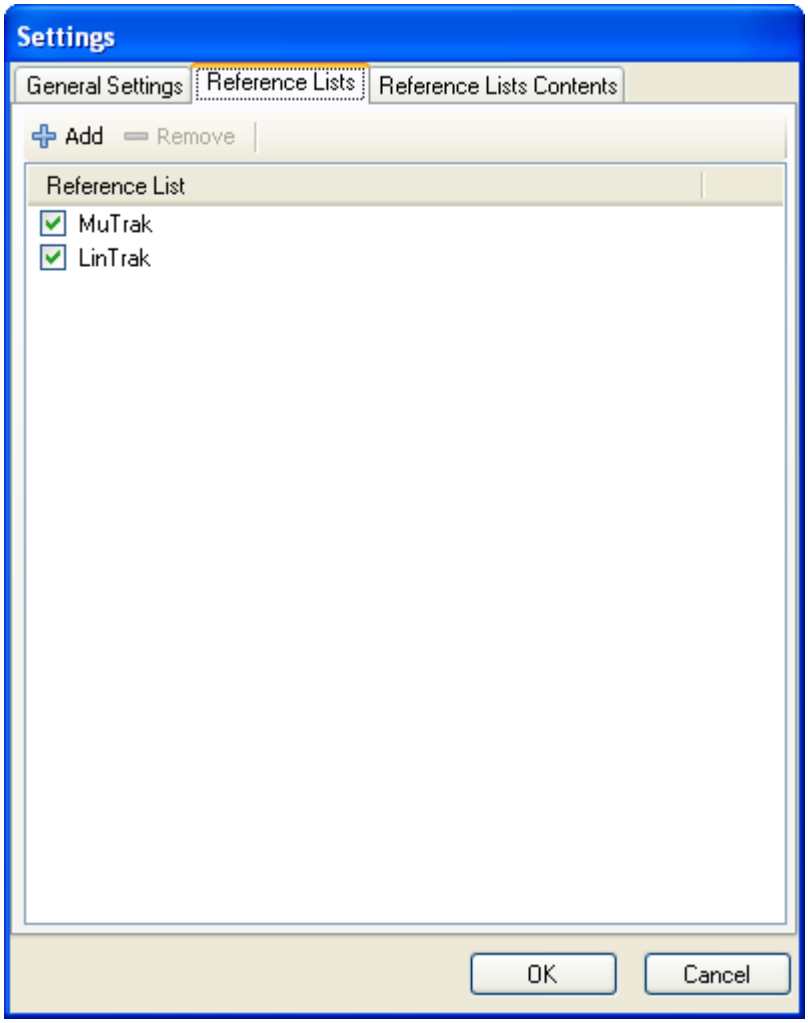


6.3 Configuring the application

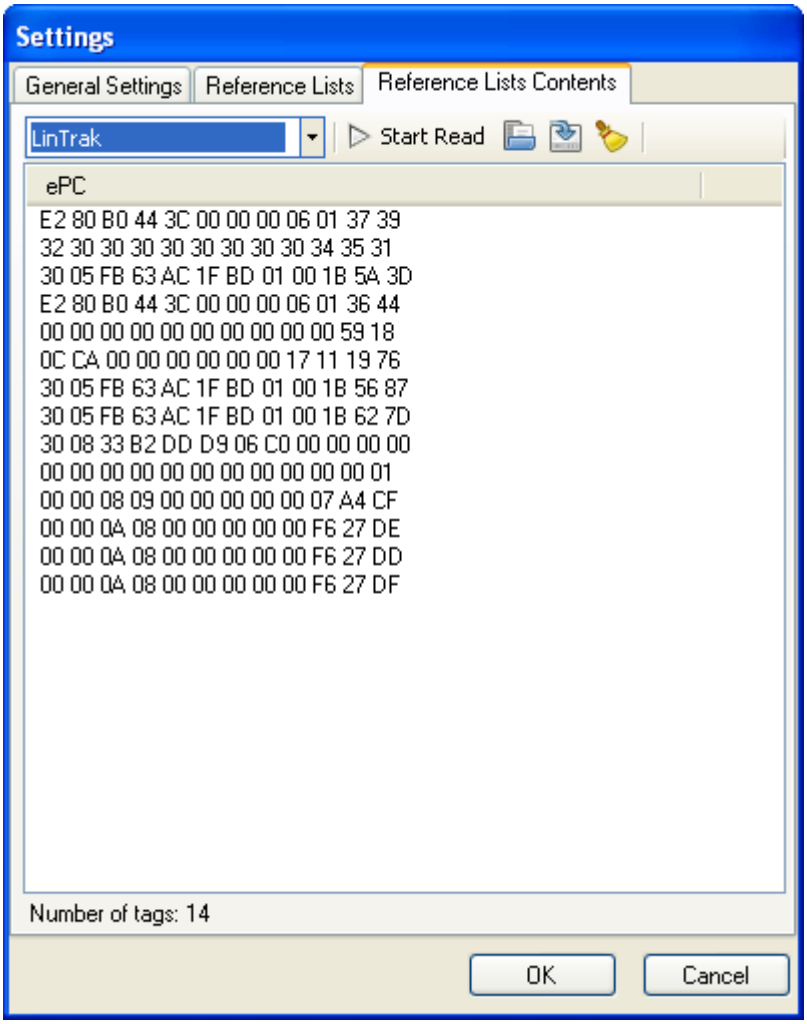
Click on the blue button. The following window appears:

- In “General Settings” page :
  - Select SRU-400 as the reader model.
  - Type the COM Port value assigned by the PC.
  - Select the desired output power in cdBm (generally 2100 cdBm).
  - Select User Mode value (generally Default).
  - Read timeout (ms): amount of time allocated by the reader for the read session.
  - Region: region mode to be selected according with product version in use (EU3 for SRU-400-EU and US for SRU-400-US).
  - Power mode: power transmit mode to be used during a read session. For this product, it is recommended to use the “Low power” setting value.
  - “Display Mode” selects the way referenced tag ePCs are reported in “Bulk Read” panel. They are either appended to reference list area or removed from this list as they are read (reverse inventory).

- If “Beep on read” is selected, a sound will be emitted each time a tag is read.
- If “Log reads” is selected, tag reads will be saved to disk in the application directory (Logs subfolder).



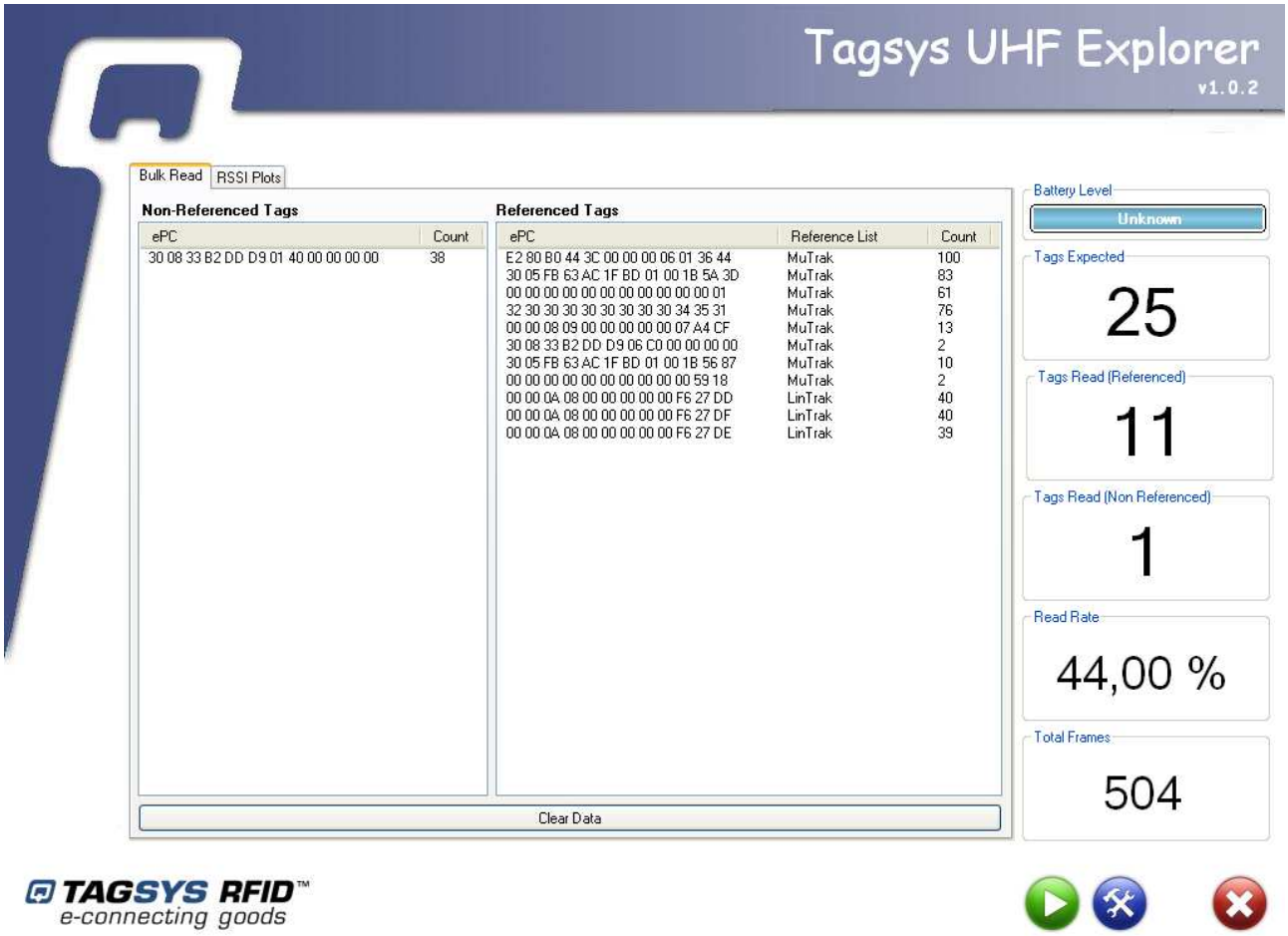
- “Reference Lists” page allows the user to define and name several lists of referenced tags, and select whether or not they will be active for further read operations.



- "Reference Lists Contents" page allows the user to populate reference lists defined in "Reference Lists" page. Reference lists can also be cleared, saved to or loaded from disk as "csv" type files.

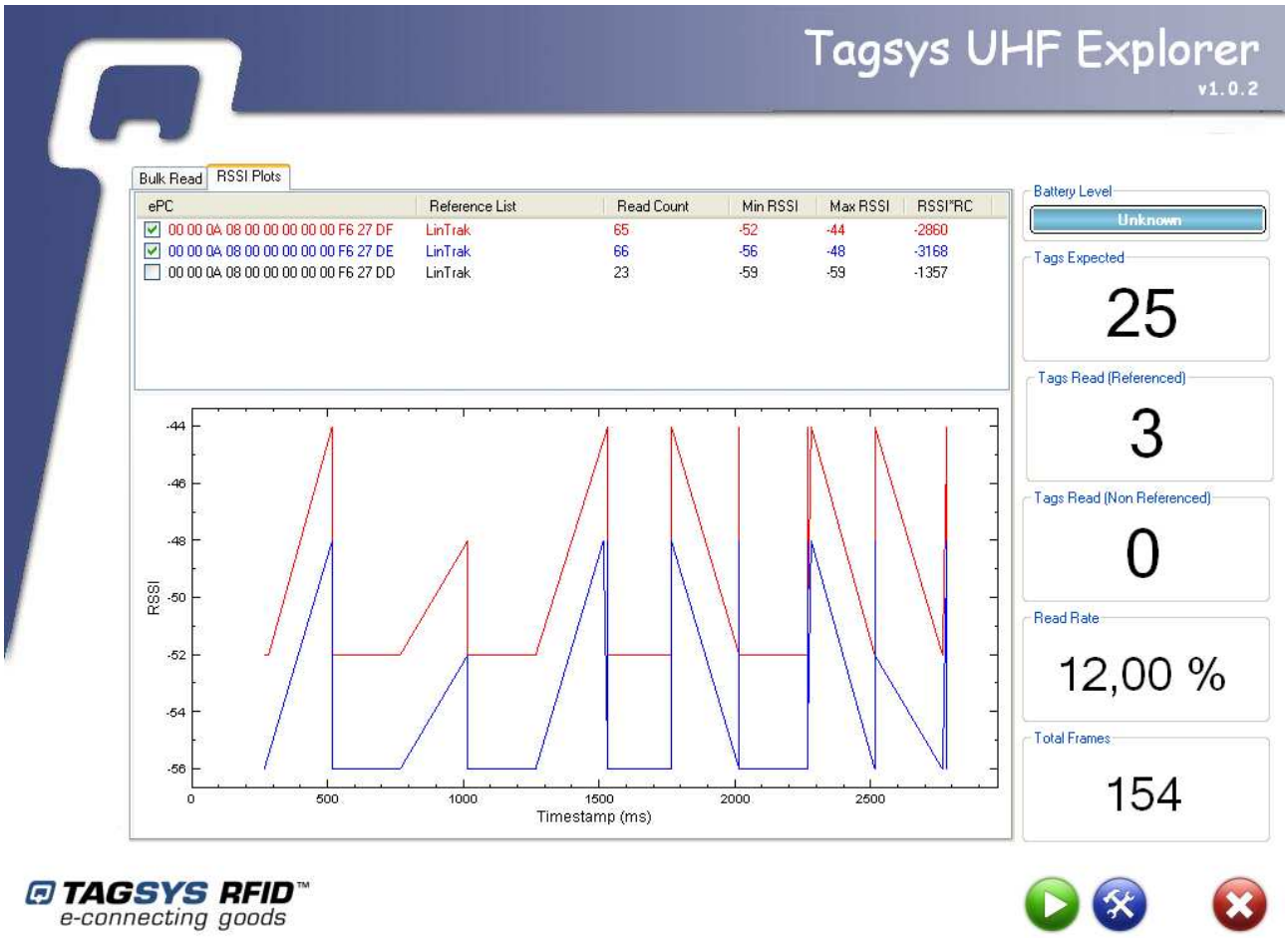
6.4 Reading tags

Once the application is properly configured, click on the green button to start reading tags.



- "Bulk Read" panel contains :
  - The list of tag ePCs that belong to one of the active reference lists. Several reference lists can be created from the settings window.
  - The list of tag ePCs that do not belong to any of the active reference lists.
  - A "Clear Data" button that resets all lists and counters.
- "Tags Expected" reports the total number of tags that are expected to be read. This is the sum of all tags in all active reference lists.
- "Tags Read (Referenced)" is the total number of tags read that belong to one of the active reference lists.
- "Tags Read (Non Referenced)" is the total number of tags read that do not belong to any of the active reference lists.
- "Read Rate" is the percentage of referenced tags read compared to the expected number of tags read.
- "Total Frames" is the total number of received tag frames.

- “Battery level” is not available for SRU-400 product.



“RSSI Plots” panel displays, for each selected tag, the evolution of its RSSI over time. These values are available only after the reading operation is stopped.

7 Software development

7.1 Software Overview

A software package is available for developing custom applications based on Windows 9x, 2000, NT, XP, for SRU-400 equipped with ThingMagic M4e/M5e modules.

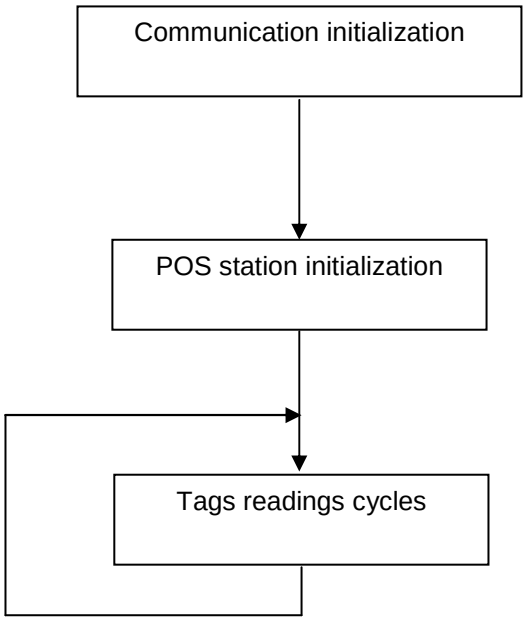
This package contains:

- Native DLLs with programming guide and C++ client application (with source code file)

- Visual basic 6.0 suite (VB 6.0 client application, VB 6.0 Developers Guide, VB 6.0 Wrapper)

7.2 Reading Process

Figure 5: Standard Tag Reading Algorithm



7.2.1 Communication Initialization

Connect function:

Open a serial communication port on the PC host to communicate with the SRU-400 (use 9600 bauds rate which is the default value at power on of the SRU-400). If the application succeeds opening the port, the answer will be true else false.

This function does not allow checking if a SRU-400 is connected to the Com Port. Even no SRU-400 connected to the Com port, you may succeed opening it because it is supported by the host PC.

A convenient way to know if the SRU-400 is connected to the PC is sending a command and check the reply value (No-Error, CRC-Failure or Error-Timeout). See DLLs User guide for more information. We suggest to use the **GetBootLoaderAndFirmwareVersion** command. Answer will reports UHF module version which can be used or displayed then in your application software.

Be sure after connection of the SRU-400 to the host PC that the assigned Com port value is lower than 10. Higher Com port values are not supported by the DLLs. Please re-assign this Com port value to an unused port (1 to 9).

SetBaudRate function: If it is needed to increase the communication baud rate, following process must be performed:

- Call SetBaudRate function to set the SRU-400 to the required baud rate. When this command is sent, SRU-400 first replies at the current baud rate (this allows to receive correctly the station answer) then swaps automatically to the new baud rate.

- Since now the SRU-400 has a new baud rate, the application has first to close the current Com Port and re-open it with the new baud rate value, using Disconnect then Connect (COM PORT, New Baud rate) functions, to ensure further communication with the SRU-400.

7.2.2 SRU-400 Initialization

BootFirmware command:

This command is mandatory and needs to be used at first once you have used the **connect** function. This command allows enabling all the UHF module features including tag commands.

Then, following script of functions must be used:

Set region command:

This command is mandatory for SRU-400 equipped with M5e UHF module. It configures UHF M5e modules for the current region in use (US, Europe, Korea, Japan), see **DLL programming guide**, to be compared to the M4e coupler which does not support this command (M4e is only for US use).

Be sure to set the appropriate region code (US, EU, KR and JP) to both comply with RF regulations requirements of the region and to get the best performances of the SRU-400.

```
status = Set region (region code)

        if (status == Invalid return code)
{
        /* UHF module is a M4e type*/
}
        else if (status == No error code)
                {
                        /* UHF module is a M5e type */
```

SetCurrentTag protocol command:

Set the tag protocol (ePC GEN2)

SetReadTxPower command:

Set the output reading power (21 dBm is the recommended value)

SetAntennaPort command:

Set the antenna configuration port (Tx=Rx=1 must be used)

7.2.3 Tag Reading Cycles

Tags readings can be performed in an infinite loop, following process below:

ClearTagIdBuffer command: Clear tag buffer filled by previous ReadTagIdMultiple session

ReadTagIDMultiple command: Read tags in the field and store the tags ID in the TagIdBuffer

GetTagIdBuffer command: Retrieve the tags ID stored in the TagIdBuffer for the application.

Please note that **GetTagIdBuffer** command can only retrieve a maximum of 13 tags ID at a time. If there are more than 13 tags available in the buffer (**GetNbOfTagIdInBuffer** function gets back how many tags have been already read in the buffer and how many tags are available in the buffer), **GetTadIdBuffer** needs to be used again to retrieve next tags.

Please refer to **DLLs programming guide** and source codes of client application (included in the CD-ROM package) for further information.

8 Maintenance

8.1 Servicing the SRU-400

The SRU-400 contains no operator serviceable parts and must only be serviced by qualified personnel.

No regular servicing is required, except for keeping the unit clean.

It is recommended that the antenna unit be inspected at least once per year by an approved TAGSYS technical representative.

8.2 Antenna Tuning

The TAGSYS SRU-400 is factory-calibrated. For any questions about antenna tuning, please contact your TAGSYS representative.

9 Technical Data

9.1 Mechanical Characteristics

Description	Value
Housing	Aluminum bars and plastic stratified cover
Dimensions (with Cover)	460 x 460 x 30 mm. (18.11 x 18.11 x 1.18 in.)
Weight	4 Kg. (8.8 lbs.)
Color	Light grey (RAL 7035)
Protection Class	IP 21
Operating Temperature	0 ℃ to 40 ℃ (32 ℉ to 104 ° F)
Storage Temperature	-20 ℃ to +60 ℃ (-68 ℉ to 140 ℉)

9.2 Electrical Characteristics

Description	Value
Nominal Input Voltage	+12V DC/30W (2.1mm jack connector)
Operating Frequency	SRU-400-US: 902-928 MHz (US version) SRU-400-EU: 866-868 MHz (Europe version)

10 Warranty Conditions

10.1 Warranty

TAGSYS warrants that its SRU-400 (Product) shall comply with the functional specifications set forth herein for a period of one year from the date of delivery to the Buyer.

This warranty is valid for the original Buyer of the Product and is not assignable or transferable to any other party.

TAGSYS cannot be responsible in any way for, and disclaims any liability in connection with the operation or performance of:

- any product in which the Product is incorporated;
- any equipment not supplied by TAGSYS which is attached to or used in connection with the Product; or,
- the Product with any equipment.

This warranty only applies to the Product and excludes all other equipment.

Optimal operation and performance of the Product are obtained by using TAGSYS' readers, by applying TAGSYS installation guidelines and by having your installation reviewed by a TAGSYS' technical consultant.

The TAGSYS warranty does not cover the installation, maintenance or service of the Product and is strictly limited to the replacement of Products considered as defective by TAGSYS and returned according to the return procedure defined below; in such case, TAGSYS will, at TAGSYS' option, either replace every defective Product by one new Product or refund the purchase price paid by Buyer to TAGSYS for the defective Product.

10.1.1 Warranty Exclusions

The following conditions are not covered under the warranty:

- Defects or damages resulting from storage of the Product under conditions that do not comply with TAGSYS specifications or normal usage.
- Defects or damages resulting from use of the Product in abnormal conditions (abnormal conditions being defined as any conditions exceeding the ones stated in the product specifications).
- Defects or damages from misuse, accident or neglect.
- Defects from improper testing, operation, maintenance or installation.
- Defects from alteration, modification except modifications or adjustments specifically described in this Product reference guide, adjustment or repair, or any attempt to do any of the foregoing, by anyone other than TAGSYS.
- Any action on the product that prevents TAGSYS to perform an inspection and test of the Product in case of a warranty claim.
- Tampering with or abuse of the Product.
- Any use or incorporation by the Buyer or a third party of TAGSYS' Product into life saving or life support devices or systems, or any related products; TAGSYS expressly excludes any liability for such use.

10.1.2 General Provisions

This warranty sets forth the full extent of TAGSYS responsibility regarding the Product.

In any event, TAGSYS warranty is strictly limited to (at TAGSYS' sole option) the replacement or refund of the Products purchase price to TAGSYS, of Products considered as defective by TAGSYS.

The remedy provided above is in lieu and to the exclusion of all other remedies, obligations or liabilities on the part of TAGSYS for damages, whether in contract, tort or otherwise, and including but not limited to, damages for any defects in the Products or for any injury, damage, or loss resulting from such defects or from any work done in connection therewith or for consequential loss, whether based upon lost goodwill, lost resale profits, impairment of other goods or arising from claims by third parties or otherwise.

TAGSYS disclaims any explicit warranty not provided herein and any implied warranty, guaranty or representation as to performance, quality and absence of hidden defects, and any remedy for breach of contract, which but for this provision, might arise by implication, operation of law, custom of trade or course of dealing, including implied warranties of merchantability and fitness for a particular purpose.

10.1.3 How to Return Defective Products

The Buyer shall notify TAGSYS of the defects within 15 working days after the defects are discovered.

Defective Products must be returned to TAGSYS after assignment by a TAGSYS Quality Department representative of an RMA (Return Material Authorization) number. No Products shall be returned without their proof of purchase and without the acceptance number relating to the return procedure.

All Products shall be returned with a report from the Buyer stating the complete details of the alleged defect.

Call +33 (0) 4 42 18 89 00 for return authorization and shipping address.

If returned Products prove to be non-defective, a charge will be applied to cover TAGSYS' analysis cost and shipping costs.

If the warranty does not apply for returned Products (due to age, or application of a warranty exclusion clause), a quote for replacement will be issued, and no replacement will be granted until a valid purchase order is received. If no purchase order is received within 30 days after the date of TAGSYS quote, TAGSYS will return the products and charge the analysis cost and shipping costs.

All replaced Products shall become the property of TAGSYS.

The Product Return Form is included on the following page. This form should accompany any product you need to return to TAGSYS for analysis in the event of a problem.

Product Return Form

Customer Profile:

Company:.....
Address:.....
City & State: .....
Zip Code: .....
Country: .....

RMA Number : .....
Date : .....

Contact Name: .....
Contact e-mail: .....
Contact Phone:.....
Contact Fax: .....

Order identification:

Product Name: .....

Serial or Batch nr :.....
Return Quantity: .....

Reason for return:

.....
.....
.....
.....
.....

To inform TAGSYS of this return, please email it to

RMA@tagsysrfid.com

Address to ship the product with this document attached:

TAGSYS - QUALITY DEPARTMENT - 785, Voie Antiope – Z.I. Athelia III - 13600 La Ciotat - France

To inform TAGSYS of this return, please also fax it to your Customer Service Representative : +33 442-188-901

Return Procedure:

In order to give you a RMA number, please fulfill this document and send it by return to the above email address or to your Customer Service Representative. Please write the RMA number on the outside of the box. The product returned will go through stringent quality controls. If the product is no longer under warranty, a final analysis report will be sent to you as soon as possible as well as a quotation for repair.

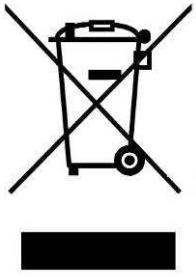
Please contact the Quality Representative for further details : +33 442-188-900

Quotation :

In case of no product repair coverage by Tagsys or product out of warranty period, any quotation will be charged to a fixed price of 100 € per product.

This amount will be deducted of the repair price in case of the quotation acceptance, or will be kept by Tagsys in case of quote refusal or no answer within 2 weeks. If quote is accepted the product will be return on an Exworks basis.

After receiving quote, in case of no answer within 2 weeks, Tagsys will be entitled to destroy the product.



This product bears the selective sorting symbol for waste electrical and electronic equipment (WEEE)
This means that this product must be handled pursuant to European Directive 2002/96/EC in order to be recycled or dismantled to minimize its impact on the environment.
For further information, please contact your local or regional authorities.